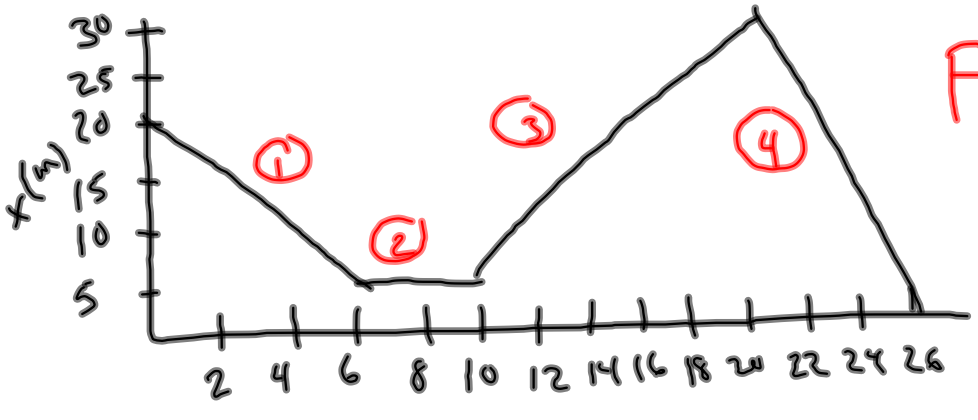
HW: p. 44: 1, 6

p. 49: 1, 4



Find $\bar{v}$'s, v's, $\bar{v}_{avg.}$, and $v_{avg.}$

$$\bar{v}_1 = \frac{5m - 20m}{6s - 0s} = -2.5\ m/s \qquad v_1 = 2.5\ m/s$$

$$\bar{v}_2 = 0\ m/s \qquad v_2 = 0\ m/s$$

$$\bar{v}_3 = \frac{30m - 5m}{20s - 10s} = 2.5\ m/s \qquad v_3 = 2.5\ m/s$$

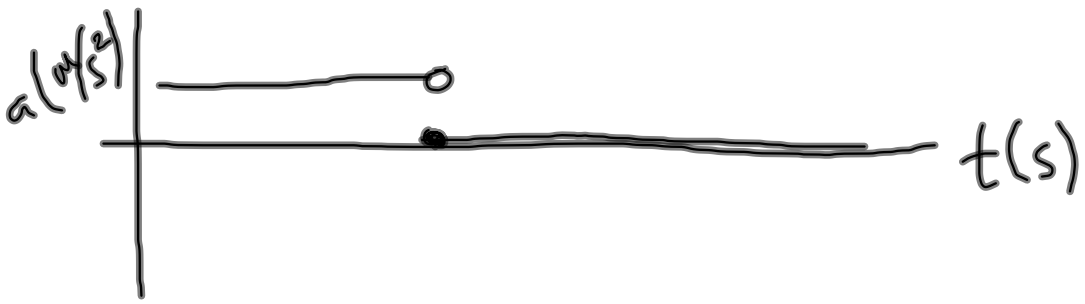
$$\bar{v}_4 = \frac{0m - 30m}{26s - 20s} = -5\ m/s \qquad v_4 = 5\ m/s$$

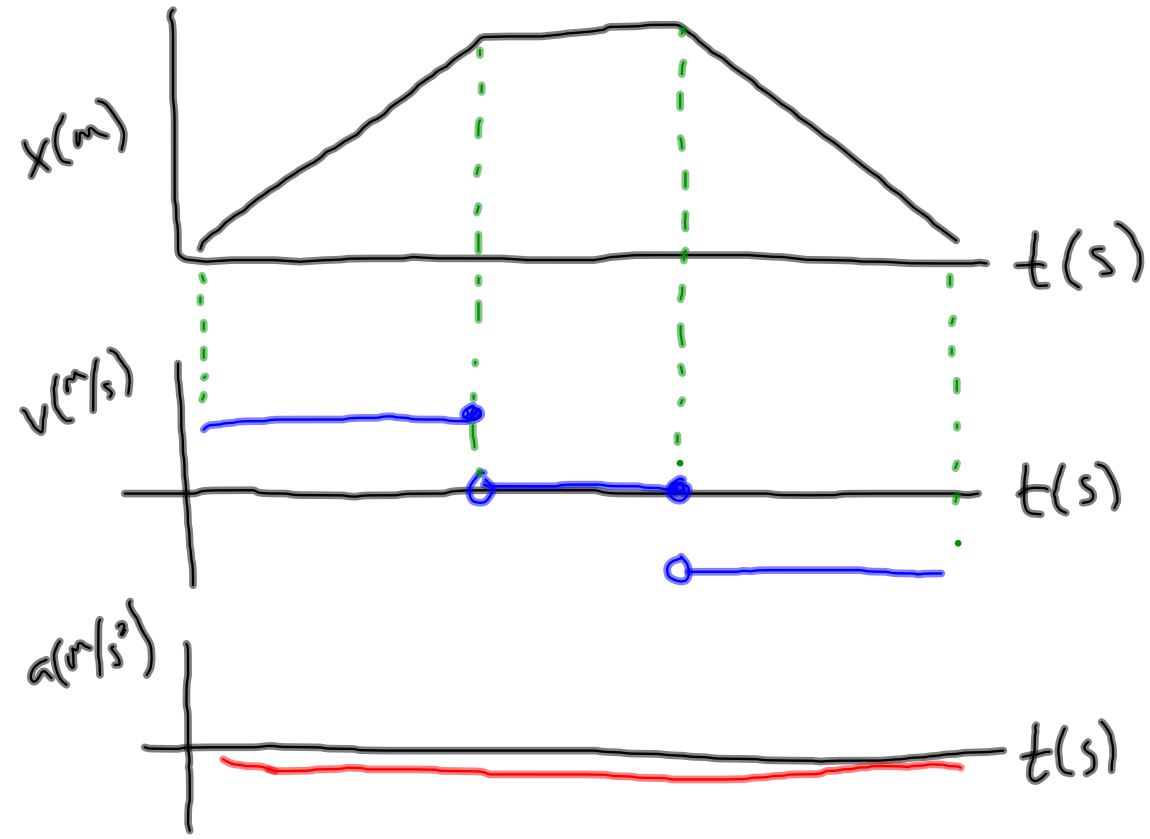
$$\bar{v}_{avg.} = \frac{0\ m - 20m}{26s - 0s} = -0.77\ m/s$$

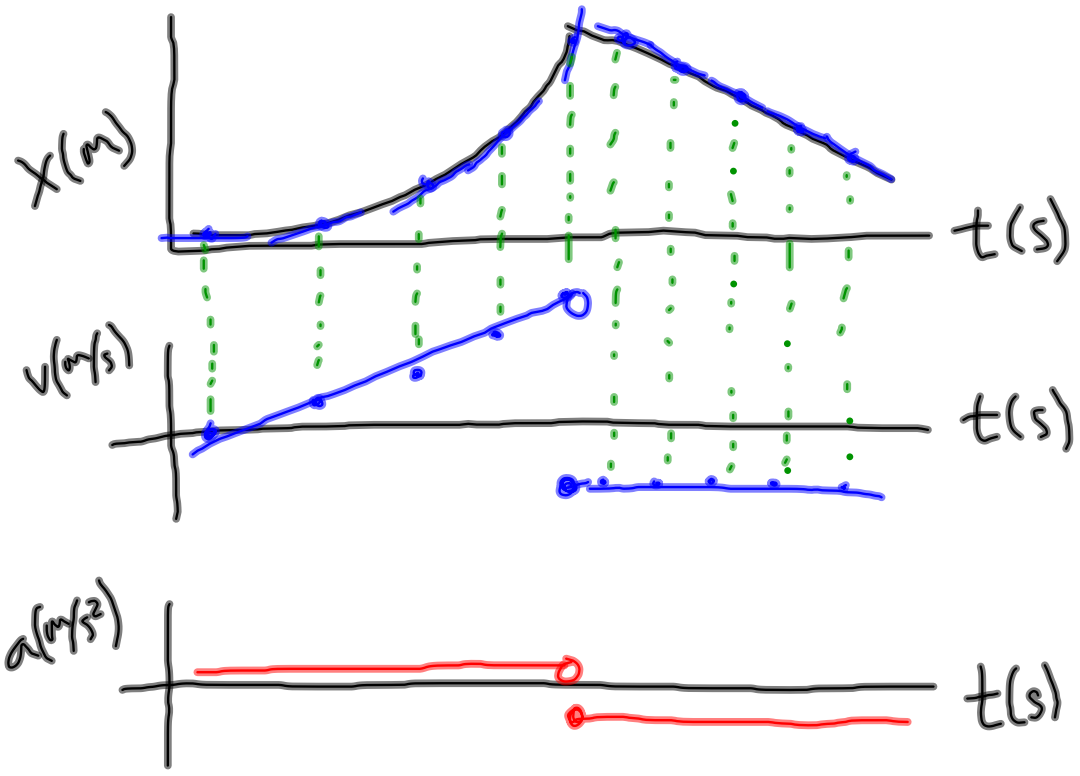
$$v_{avg.} = \frac{\text{tot. dist.}}{\text{tot. time}} = \frac{70m}{26s} = 2.7\ m/s$$

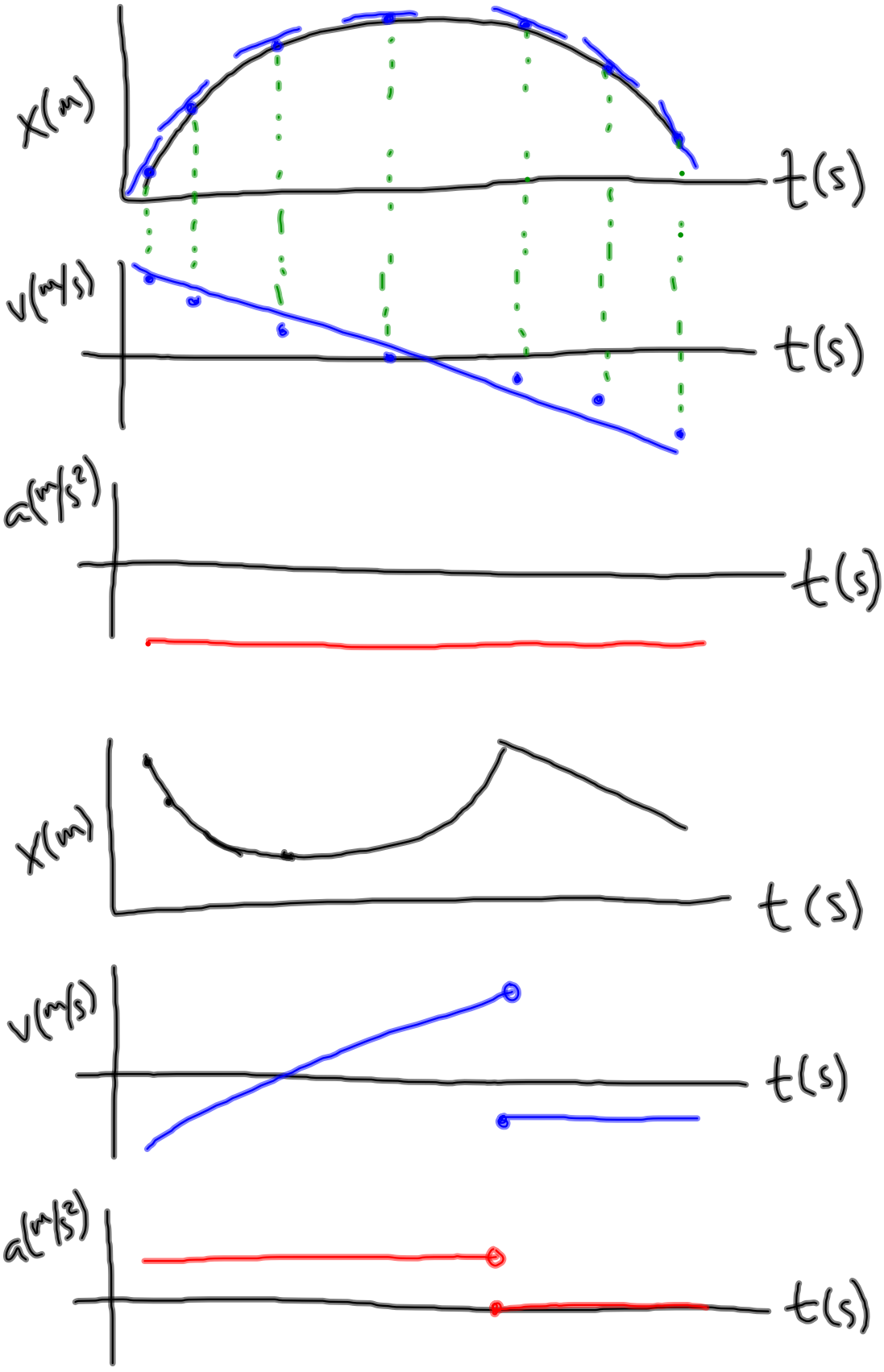
Acceleration:

- Graphically found by looking at the slope of a function in a velocity v. time graph
- Equation: $\bar{a} = \frac{\bar{V}_f - \bar{V}_i}{t_f - t_i}$




x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)


x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)


x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)
x(m)
t(s)
v(m/s)
t(s)
a(m/s²)
t(s)